

REMARKS

This amendment is submitted in response to the Office Action mailed June 24, 2005. Favorable reconsideration of the application, as amended, is respectfully requested.

Claims 8, 9 and 53 were rejected under 35 U.S.C. 103(a) as being unpatentable over Schult (U.S. 4,911,975) in view of Yap et al. (U.S. 6,037,398) and Wilkes (U.S. 4,609,696). Applicants respectfully submit that the claims are nonobvious over the cited patents.

Independent claims 8 and 53 have been amended to state that the roofing material further comprises a layer of surface granules embedded in the top portion of the coating. Schult teaches away from the use of such granules to protect the upper surface of the roofing material (see col. 1, lines 24-54). Yap et al. and Wilkes do not disclose such granules. Therefore, it is respectfully submitted that the claims are nonobvious over the Schult, Yap et al. and Wilkes patents.

Claims 8, 9, 53, 58 and 59 were rejected under 35 U.S.C. 103(a) as being unpatentable over Hansen (U.S. 4,405,680) in view of Nelson (U.S. 2,085,992). Applicants respectfully submit that the claims are nonobvious over the cited patents. Independent claims 8 and 53 recite a roofing material including an asphalt-based coating, where the top portion of the coating passes a weathering performance test as measured by at least 60 cycles-to-failure using ASTM Method D4799, and the bottom portion of the coating does not pass the weathering performance test.

The Hansen patent discloses a roofing shingle including a mat saturated with a mixture of unblown asphalt and polymer, and a top coating that is a mixture of blown asphalt and filler. The Nelson patent discloses asphalt compositions containing antioxidants for improved weatherability. In the Office Action, the Examiner argued that it would be obvious to modify the Hansen roofing shingle by adding a Nelson antioxidant to the top coating, in order to provide a top coating having improved weatherability. The Examiner stated that he assumes, absent evidence to the contrary, that the top coating having added antioxidant would pass the ASTM D4799 weathering test.

Applicants have submitted herewith a declaration under 37 CFR 1.132 from David R. Jones, IV, an expert in the field of asphalt, particularly for roofing

applications and paving applications. Mr. Jones is very knowledgeable about the ASTM D4799 weathering test for asphalt, and about the effect on the weathering test results of the addition of antioxidants to asphalt. In the declaration, Mr. Jones states that in his opinion, it is incorrect to state that the top coating of the Hansen patent modified by adding an antioxidant from the Nelson patent would pass the ASTM D4799 weathering test. He states that because of the wide diversity of molecules that comprise asphalt, it is extremely hard to find an antioxidant that works to improve the weathering of asphalt as measured by the ASTM D4799 test. Mr. Jones states that work on antioxidant use in asphalts conducted during the Strategic Highway Research Program demonstrated that standard free-radical-terminator antioxidants (most of the world of antioxidants) do not work in asphalt. Specifically, with respect to the antioxidants disclosed in the Nelson patent, his opinion is that they would not significantly improve asphalt weathering as measured by the test. His opinion is that passing the test would depend on the specific type of asphalt used, and the Hansen patent gives no specifics on the type of asphalt used. Therefore, Mr. Jones concludes that it cannot be said that the Hansen top coating modified by adding a Nelson antioxidant would pass the ASTM D4799 weathering test.

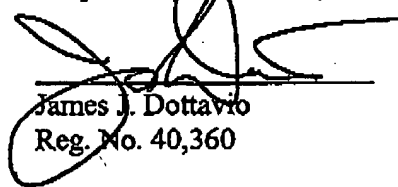
It should be emphasized that there is no suggestion in the Hansen patent of using a particular type of asphalt in the top coating, such as an asphalt containing primarily Alaska North Slope crude or the like. The patent only discloses that the asphalt used in the top coating is blown asphalt having a softening point between 100°C and 120°C. In the example, the coating asphalt is described as blown asphalt used commercially in the manufacture of shingles, and having a softening point of 102°C. Consequently, it cannot be determined whether the top coating would pass the ASTM D4799 weathering test even if an effective antioxidant was discovered and added to the top coating. Moreover, it cannot be determined whether the top coating would pass the ASTM D4799 weathering test while the bottom portion of the coating would not pass the weathering test, as recited in claims 8 and 53.

Applicants also respectfully submit that there is no motivation provided in the Hansen and Nelson patents to combine the teachings of the patents, in order to modify the Hansen top coating by adding a Nelson antioxidant. The oxidation of the asphalt in the top coating is described as an advantage in the Hansen patent (col. 3, lines 48-

65). The patent states that the oxidation of the asphalt brings about further condensation of aromatic and cyclic hydrocarbon rings contained in the asphalt to form a greater proportion of higher molecular weight components, thereby increasing the softening point of the asphalt. The patent requires the use of an asphalt that has been oxidized by air blowing to increase the softening point to within the range of 100°C to 120°C. In view of these teachings, a person of ordinary skill in the art would not be motivated to add an antioxidant to the Hansen asphalt, in order to reduce the oxidation of the asphalt.

If any questions should arise with respect to the amendments or the above remarks, or if it would in any way expedite the prosecution of this application, it is requested that the Examiner contact Applicants' attorney at the number listed below. If any fees are due in connection with the filing of this amendment, including any fee for a required extension of time under 37 CFR 1.136(a) for which Applicants hereby petition, please charge all necessary fees to deposit account no. 50-0568.

Respectfully submitted,



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